

September 20, 2024

Ms. Marlene Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz), Public Notice (WT Docket No. 24-240)

Dear Ms. Dortch,

The undersigned organizations submit reply comments in response to the Federal Communications Commission’s (“FCC”) Public Notice regarding NextNav’s petition for rulemaking to reorganize the 902-928 MHz band (“Lower 900 MHz Band or Band”) and establish a 5G terrestrial-based Positioning, Navigation, and Timing (“PNT”) network (“NextNav Petition”).¹ Our organizations represent a broad cross-section of industry stakeholders that currently utilize frequencies in the Lower 900 MHz band. Although there are benefits to pursuing complements to GPS, we reiterate our concerns with the NextNav Petition, which are shared by a broad range of stakeholders. Based on the overwhelming opposition due to the potential harm posed by the approval of the NextNav Petition, and how NetNav’s insufficient detail to address those potential harms, we respectfully request that the FCC dismiss the NextNav Petition.²

I. Overwhelming Record Evidence Underscores Widespread Concern And Scant Support For The NextNav Petition

The record establishes with overwhelming evidence that the Lower 900 MHz Band is intensively used by a wide variety of industries and their customers—contrary to a core premise of the NextNav Petition that the band is lightly used and can be easily repurposed.³ Commenters have demonstrated that the Lower 900 MHz band is widely used by customers of broad sectors of the economy—including operations involving retail, critical infrastructure,

¹ NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz), Public Notice, WT Docket No. 24-240 (rel. Aug. 6, 2024) (“NextNav Petition”).

² The request to dismiss is specific to this Petition. Other proposals to repurpose spectrum can play an important role in advancing spectrum policy if they demonstrate an understanding of current spectrum usage and propose feasible approaches to mitigate those concerns.

³ NextNav Petition at 17.

aviation, electrical utilities. oil, natural gas, railroads, highway tolling, broadband, smart home devices, security, public safety, and supply chain.⁴

The record in response to the Public Notice establishes that the harms outweigh the benefits if the NextNav Petition is approved.⁵ Consider the following use cases that could be disrupted by granting the NextNav Petition:

Building and Home Security: The Security Industry Association outlined how the NextNav Petition would hinder the use of devices that protect residences and small businesses, while also reducing the reliability of security camera systems and electronic access control devices.⁶ Similarly, the Builders Hardware Manufacturers Association and the EnOcean Alliance discussed how the grant of the NextNav Petition would reduce security and increase costs for schools, hospitals, and businesses.⁷

Highway Transportation: The PrePass Safety Alliance emphasized how bypass and toll transponders will face unacceptable interference from NextNav’s proposed operations.⁸ The Wisconsin Motor Carrier Association explained that the Petition would disrupt Weigh Station Bypass Programs, increasing environmental emissions and leading to increased costs for commercial motor carriers.⁹ The International Bridge, Tunnel; and Turnpike Association (IBTTA) cited that the proposed high-power would dramatically hurt electronic tolling system performance, placing millions of drivers and billions in public revenue at risk, while limiting future toll expansion and national interoperability.¹⁰

Broadband Service: According to WISPA—The Association for Broadband Without Boundaries, the Petition would constrain fixed wireless providers from providing broadband service in rural areas of the country.¹¹ In contrast, despite NextNav’s claims, the record provides minimal evidence that the Petition would increase broadband service.

⁴ See Comments of the U.S. Chamber of Commerce et. al., WT Docket No. 24-240, at 3 (filed Sept. 5, 2024) (“Chamber Coalition Comments”); Comments of WISPA – The Association for Broadband Without Boundaries, WT Docket No. 24-240, at 2-3 (filed Sept. 5, 2024) (“WISPA Comments”); Comments of the Security Industry Association, WT Docket No. 24-240, at 1 (filed Sept. 5, 2024) (“SIA Comments”); Comments of the Z-Wave Alliance, WT Docket No. 24-240, at 1 (filed Sept. 5, 2024) (“Z-Wave Comments”); Comments of the PrePass Safety Alliance, WT Docket No. 24-240, at 5 (filed Sept. 4, 2024) (“PrePass Safety Alliance Comments”).

⁵ See Comments of the GPS Innovation Alliance, WT Docket No. 24-240, at 5-6 (filed Sept. 5, 2024) (“GPS Innovation Alliance Comments”); Comments of the National Association of Broadcasters, WT Docket No. 24-240, at 1-2 (filed Sept. 5, 2024) (“NAB Comments”).

⁶ SIA Comments at 2.

⁷ Comments of the Builders Hardware Manufacturers Association, WT Docket No. 24-240, at 2 (filed Sept. 5, 2024); Comments of the EnOcean Alliance, WT Docket No. 24-240 (filed Sept. 2, 2024).

⁸ Comments of PrePass Safety Alliance, WT Docket No. 24-240, at 4 (filed Sept. 5, 2024).

⁹ Comments of the Wisconsin Motor Carrier Association, WT Docket No. 24-240, at 1 (filed Sept. 5, 2024).

¹⁰ Comments of International Bridge, Tunnel and Turnpike Association (IBTTA) WT Docket No. 24-240, at 14 (filed Sept. 5, 2024).

¹¹ WISPA Comments at 4-5.

Automotive: Honda utilizes a keyless entry system in some of its Acura vehicles. The Petition could adversely impact that system and potentially require Honda to change to a different band, which would impose significant costs and consumer inconvenience.¹²

Electric Utilities: The Edison Electric Institute and Dominion outlined how the electric power industry relies on the Lower 900 MHz band for smart meters and SCADA systems.¹³ The Petition could cause harmful interference to those operations and jeopardize utility operations.¹⁴

Internet of Things: Wi-Fi Alliance indicates that the Lower 900 MHz band is used by millions of devices to deliver important and innovative Internet of Things applications like smart agriculture, industrial monitoring, smart city infrastructure, and home automation.¹⁵

Airlines: According to Airlines for America, multiple operators depend on RFID tagging in the 900 MHz spectrum for inventory control of critical, and often safety-related parts. Interference with these systems could threaten schedule reliability resulting in significant flight delays. At least one major airline has also implemented RFID tagging for the handling of passenger luggage where interference could cause mishandling with unacceptable inconvenience to passengers.

Retail, Manufacturing, and Supply Chain Operations: The NextNav Petition would hinder the efficient operation of systems pertaining to tank and leak monitoring, inventory control, fleet management, asset tracking and protection, price scanners, and other systems. These systems are commonly deployed by retailers, suppliers, manufacturers, and small businesses across nation.¹⁶

Against this evidence of harm and a broad chorus to reject or dismiss the NextNav Petition,¹⁷ the record reflects scant support for the NextNav Petition. Not one consumer group, wireless carrier, or broadband provider endorsed the NextNav Petition. Even major GPS advocates took no position on the merits of the NextNav Petition.¹⁸ And EchoStar Corporation, a mobile wireless provider that could serve as a potential partner for NextNav, expressed

¹² Comments of the American Honda Motor Co. Inc., WT Docket No. 24-240, at 2 (filed Sept. 5, 2024).

¹³ Comments of the Edison Electric Institute, WT Docket No. 24-240, at 4-5 (filed Sept. 5, 2024).

¹⁴ Comments of Dominion Energy Inc. WT Docket No. 24-240, at 3 (filed Sept. 5, 2024).

¹⁵ Comments of the Wi-Fi Alliance, WT Docket No. 24-240, at 2 (filed Sept. 5, 2024).

¹⁶ See e.g. Chamber Coalition Comments at 2.

¹⁷ See Chamber Coalition Comments; WISPA Comments at 2; Comments of NCTA – The Internet and Television Association, WT Docket No. 24-240, at 2 (filed Sept. 5, 2024); Comments of ARRL, The National Association For Amateur Radio, WT Docket No. 24-240, at 7 (filed Sept. 5, 2024); Comments of Washington State Department of Transportation, WT Docket No. 24-240, at 1 (filed Sept. 5, 2024); Comments of Open Technology Institute et. al., WT Docket No. 24-240, at 3 (filed Sept. 5, 2024); Comments of the PrePass Safety Alliance, WT Docket No. 24-240, at 5 (filed Sept. 4, 2024).

¹⁸ GPS Innovation Alliance Comments at 1.

concern with NextNav’s proposal to lease spectrum.¹⁹ Moving forward with this flawed proposal would distract FCC resources, risk harming millions of consumers and businesses, and lacks a clear public interest.

II. The Commission Must Consider Crowding, and Not Just Interference, When Contemplating Potential Coexistence under NextNav's Flawed Petition

The record supports that the NextNav Petition would have implications for harmful interference. Moreover, most if not all incumbent operations will be forced into a shared 900 MHz band that is almost 60% smaller than the current Lower 900 MHz band.²⁰ The many devices that are not compatible with the high-powered operations proposed by NextNav will have to migrate to this “leftover” portion of the band. Even devices that could somehow avoid actual co-channel or desensitization interference will have to cope with unrestricted use of most of the 900 MHz band for broadband services, including activities such as continuous video viewing, gaming, and internet surfing – again pushing these devices into the leftover part of the band. Commenters are virtually unanimous that this dynamic will lead to severe channel crowding, which will cause degradation of communications by most users of the Lower 900 MHz band.²¹

The extraordinary breadth of the channel crowding problem can only be seen by reviewing the relevant comments in the record:

- The Z-Wave Alliance estimates that there are more than one hundred million non-spread spectrum Z-Wave devices deployed.²²
- AICC believes that there are tens of millions of spread spectrum alarm devices.²³
- Digi International, Inc. conservatively estimates that more than 294,000,000 devices in the Lower 900 MHz Band may be adversely affected by adoption of the NextNav proposal.
- The International Bridge, Tunnel and Turnpike Association (IBTTA) cites about 120 million electronic tolling transponders used today in the U.S. that are read at tens of thousands of tolling points on American roads. In 2023, U.S. electronic tolling processed more than 5 billion transactions, responsible for more the \$22 billion in revenue annually.²⁴
- The Security Industry Association estimates that millions of security cameras, as well as millions of electronic access control (EAC) devices are deployed in the Lower 900 MHz band.

¹⁹ Comments of EchoStar Corporation, WT Docket No. 24-240, at 1 (filed Sept. 5, 2024).

²⁰ Comments of the Alarm Industry Communications Committee, WT Docket No. 24-240, at 9 (filed Sept. 5, 2024).

²¹ See Alarm Industry Communications Committee Comments at 12; Digi International Comments at 16-17; SIA Comments at 2; WISPA Comments at 6-7; Z-Wave Alliance Comments at 10.

²² Z-Wave Alliance Comments at 3.

²³ Alarm Industry Communications Committee Comments at 5

²⁴ International Bridge, Tunnel and Turnpike Association (IBTTA) Comments at 3.

- RAIN Alliance/AIM Inc. indicate that there are approximately 80 billion RAIN RFID tags deployed in the US alone.
- The LoRa Alliance estimates that tens of millions of LoRa/LoRaWAN devices have already been deployed across the U.S.²⁵
- Numerous amateur radios and other types of incumbents also operate in the band.

The number of devices that would be crowded into 40 percent or less of the spectrum that they currently occupy would be staggering. Many of these devices are currently deployed in parts of the Lower 900 MHz Band that would likely suffer interference from NextNav’s high powered operations, necessitating their replacement. The associated replacement costs – many of which would be borne by consumers and businesses – would far outweigh the value of implementing NextNav’s plan, especially when other alternatives exist.²⁶ For example, one manufacturer estimates that replacement of just 10 percent of affected 900 MHz devices would incur costs in a range of \$27 to \$33 billion, as “a reasonable, conservative preliminary estimate.”²⁷

III. NextNav Continues to Avoid Addressing the Potential Harms Caused by Its One-Sided Proposal

We previously emphasized how the NextNav Petition fails to present details on collaborating with unlicensed users in the band, despite NextNav’s stated aspiration to do so. While NextNav’s Petition asserts that “[c]oexistence between the NextGen system and unlicensed Part 15 operations should be achievable[,]”²⁸ and that “[d]iscussions between NextNav and makers of Part 15 devices are underway,” to the best of our knowledge, not a single commenter has stated that NextNav has addressed their concerns or even provided a technical proposal. While field testing²⁹ can potentially play a role to show that the NextNav Petition poses no unacceptable interference to Part 15 devices, it is premature for countless industries to take on this burden and divert resources from existing customers.

IV. Conclusion

Thank you for considering our reply comments on this proceeding. Given the well-documented concerns outlined by a wide range of stakeholders and the lack of detail presented by NextNav, the Commission should dismiss the NextNav Petition. Please reach out to Matt Furlow, Senior Director and Policy Counsel, U.S. Chamber of Commerce, at mfurlow@uschamber.com with any questions.

²⁵ Comments of the LoRa Alliance, WT Docket No. 24-240, at 3 (filed Sept. 5, 2024).

²⁶ GPS Innovation Alliance Comments at 5-6; NAB Comments at 1-2.

²⁷ Comments of Digi International, Inc., WT Docket No. 24-240, at 20 (filed Sept. 5, 2024).

²⁸ NextNav Petition at 31.

²⁹ As discussed previously, field testing must include impacts on crowding and not just interference.

Sincerely,

ACT | The App Association
Aerospace Industries Association (AIA)
Airlines for America
Airports Council International – North America
Alarm Industry Communications Committee
American Apparel & Footwear Association
American Gas Association
American Petroleum Institute
American Short Line and Regional Railroad Association
American Trucking Associations
Association of American Railroads
Association of Home Appliance Manufacturers
Association for Uncrewed Vehicle Systems International
Builders Hardware Manufacturers Association
Cargo Airline Association
Colorado Motor Carriers Association
Connected Health Initiative
Connectivity Standards Alliance
Consumer Technology Association (CTA)
Dynamic Spectrum Alliance (DSA)
Edison Electric Institute
Electronic Security Association
Energy Telecommunications and Electrical Association (ENTELEC)
EnOcean Alliance
Enterprise Wireless Alliance
General Aviation Manufacturers Association
Georgia Motor Trucking Association
Halloween Industry Association (HIA)
Idaho Trucking Association
Illinois Trucking Association
INCOMPAS
Indiana Motor Truck Association
Information Technology Industry Council (ITI)
Intelligent Transportation Society of America
International Bridge Tunnel and Turnpike Association (IBTTA)
Juvenile Products Manufacturers Association
LoRa Alliance
Maryland Motor Truck Association
Missouri Trucking Association
National Association of Manufacturers
National Electrical Manufacturers Association

National Hydropower Association
National Retail Federation
Nebraska Trucking Association
Nevada Trucking Association
North Dakota Motor Carriers Association
Oklahoma Trucking Association
RAIN Alliance
Retail Industry Leaders Association
Rhode Island Trucking Association
Security Industry Association
Software & Information Industry Association (SIIA)
TechNet
Telecommunications Industry Association (TIA)
Tennessee Trucking Association
Texas Trucking Association
The Monitoring Association
The Small UAV Coalition
The Toy Association
Trucking Association of Massachusetts (TAM)
Trucking Association of New York
Utah Trucking Association
Utilities Technology Council
Vertical Aviation International
Virginia Trucking Association
Washington Trucking Associations
Wi-Sun Alliance
Wi-Fi Alliance
WifiForward
Wisconsin Motor Carriers Association
Wireless Broadband Alliance (WBA)
Wyoming Trucking Association
U.S. Chamber of Commerce
Z-Wave Alliance